**Army Regulation 70–50**
**AFJI 16-401**
**NAVAIRINST 8800.3A**

**Research, Development and Acquisition**

# DESIGNATING AND NAMING DEFENSE MILITARY AEROSPACE VEHICLES

**Headquarters**
**Departments of the Army, The Air Force, and The Navy**
**Washington, DC**
**1 September 1997**

**UNCLASSIFIED**

# SUMMARY of CHANGE

AR 70–50/AFJI 16–401/NAVAIRINST 8800.3A
DESIGNATING AND NAMING DEFENSE MILITARY AEROSPACE VEHICLES

This revision--

- Adds HQ USAF/XPPE responsibility to coordinate on popular name requests (paragraph 1*a*(3));
- Transfers responsibilities from HQ AFMC Aeronautical Systems Center (ASC) to HQ AFMC Cataloging and Standardization Center (CASC) (paragraph 1*a*(5));
- Clarifies wording in procedures (paragraph 3*a*);
- Changes Deputy Assistant Secretary of Defense (Production Resources) to Under Secretary of Defense (Acquisition and Technology) (paragraph 3*f*);
- Adds UAV, Army Regulation (AR), and Nuclear Biological Chemical (NBC); to Abbreviations, Acronyms, and Terms and revises definition of aerospace vehicle to include UAV (Appendix A);
- Establishes a vehicle type of “Q” for designation of Unmanned Aerial Vehicles (UAV) and a basic mission of “L” for Laser in the Aircraft section (Appendix C);
- Changes title of vehicle type symbol M (Table D-5.);
- Revises title and description of launch environment G (Table D-3);
- Changes title of vehicle type symbol M and adds description of vehicle type symbol Q for UAV (Table D-5.);
- Transfers responsibility from HQ USAF/PED to HQ USAF/XPPE;
- Changes office symbol of HQ USAF/PE and HQ USAF/PED to HQ USAF/XP and HQ USAF/XPPE, respectively;
- Changes office symbol of ASC/ENOS to ASC/ENSD and Naval Air Warfare Center Code from SRD Code SR32 The Systems Standardization Division to Code 4.1.4.1.;
- Adds Army REG 70-50 to the publication number since this joint service publication also applies to the Army and the reference to the Army REG was inadvertently omitted on the previous version;
- Changes mailing address for the Air Force and DOD point of contact (Appendix E).

**Headquarters**
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**Effective 1 September 1997**

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# DESIGNATING AND NAMING DEFENSE MILITARY AEROSPACE VEHICLES

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**History.** This publication has been reorganized to make it compatible with the Army electronic publishing database. To accomplish this conversion, Attachment 1 was made into Appendix A and the Glossary. Attachment 2 is now Appendix B. Attachment 3 is now Appendix C. Attachment 4 is now Appendix D and Attachment 5 is now Appendix E. No content has been changed.

**Summary.** This joint service publication implements DoD Directive 4120.15, *Designating and Naming Military Aerospace Vehicles*, May 2, 1985. It provides guidance and procedures for designating and naming defense military aerospace vehicles. The Air Force will use this instruction with AFPD 16–4, *Accounting for Units, Installations, and Aerospace Vehicles.*

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*This Joint regulation Supersedes AFJI 16–401 and NAVAIRINST 8800.3A,9 September 1994, and AR 70–50, 18 May 1990.
OPR: HQ USAF/XPPE (Ms Barbara Kelly) Certified by: HQ USAF/XPPE (Col Bruce Burda)



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## Glossary

## 1. Responsibilities.

*a. Department of the Air Force.*

(1) *SAF/PA.*

- Serves as central point of contact for processing and tracking requests for proposed aerospace vehicle popular names from Air Force Materiel Command (AFMC).
- Obtains final coordination for popular names from the Office of the Assistant Secretary of Defense (Public Affairs)(OASD/PA).

(2) *HQ USAF/XP.*

- Serves as DoD Executive Agent.
- Approves Mission Design Series (MDS) designators.

(3) *HQ USAF/XPPE.*

- Administers the MDS Designator Program.
- Publishes the joint service directive and DoD 4120.15–L, *Model Designation of Military Aerospace Vehicles List.*
- Coordinates on popular name requests.

(4) *HQ USAF/JA.* The Air Force Legal Services Agency (Judge Advocate General Patent Division) conducts a trademark search of proposed aerospace vehicle popular names.

(5) *HQ AFMC Cataloging and Standardization Center (CASC).*

- Serves as Air Force and DoD control point for MDS designators and aerospace vehicle popular names.
- Receives and reviews requests for and assigns DoD aerospace vehicle designations.
- Receives and reviews DoD proposed aerospace vehicle popular name requests.
- Maintains historical DoD aerospace vehicle lists.
- Reports nonstandard or unauthorized use of MDS designators (RCS: HAF–XPPE (AR)9229, *Nonstandard or Unauthorized Use of Aerospace Vehicle Designators).*

(6) *HQ AFMC Public Affairs.* Reviews requests for aerospace vehicle popular names from CASC.

*b. Department of the Army.* Office of the Assistant Secretary of the Army (Research, Development, and Acquisition [OASA [RDA]). The Deputy Assistant Secretary for Plans, Programs, and Policy is the Army single point of contact and is the official requesting agency for the Department of the Army.

*c. Department of the Navy.* Naval Air Warfare Center Aircraft Division Lakehurst/Code 4.1.4.1. The Department of the Navy single point of contact and the official requesting agency for the Department of the Navy.

## 2. Aerospace Vehicle Designation System.

CASC/LGFD assigns and HQ USAF/XP approves designators for DoD aerospace vehicles according to their Mission Design Series (MDS). DoD established the current designator reporting system in 1961 to standardize identification of military aerospace vehicles. This system uses letters and numbers to symbolize identifying characteristics of aerospace vehicles of direct interest to DoD. This instruction specifically standardizes designation symbols according to AFI 33–105, *C4 Systems Information Technology, and DoD Manual 5000.12, DoD Manual for Standard Data Elements (Microfiche),* July 1989.

## 3. Procedures for Requesting an MDS Designator.

*a.* The Military Departments must submit a written request for assignment of a distinctive MDS designator as early as possible in the development cycle. Coordinate requests with the Military Department point of contact and CASC/LGFD as soon as possible to have an MDS designator assigned. CASC/LGFD will assign and reserve the next available consecutive design number within each basic mission for new vehicles. Do not use MDS designators before approval. ***NOTE:*** Air Force agencies must coordinate MDS requests through the applicable system program office (SPO).

*b.* The Military Departments must request new designators, changes, or deletions through their single point of contact (see Appendix E). The department contact will send the request to CASC/LGFD. ***NOTE:*** Air Force agencies send their requests to CASC/LGFD.

(1) CASC/LGFD will assign the MDS designator and transmit the request to HQ USAF/XPPE, 1070 Air Force Pentagon, Washington DC 20330–1070, for processing and approval.

(2) Use the reverse order to notify requesters of approval or disapproval.

*c.* Each request for new designations, changes, or deletions must include:

- Complete MDS desired.
- Manufacturer, approved popular name (if known), engine data (number, type, and designation), and department.
- Short, unclassified, distinctive description of the vehicle suitable for publication in DoD 4120.15–L, Model Designation of Military Aerospace Vehicles List.
- Name, office symbol, and telephone number of requesting official and agency.

*d.* Aerospace vehicles undergoing significant modification or design modernization need a new MDS designator to change the status prefix, modified mission, launch environment, or series symbols. Requests for these changes must comply with paragraph 3*c.* To justify the new MDS designator, the request must include information on changes in operational capability, structure or system design, and logistics support requirements. The vehicle description should differentiate the new vehicle from other models with the same basic mission and design number.

*e.* The Military Department must include declassification instructions for classified designation requests. DoD Regulation 5200.1, *Information Security Program Regulation,* June 1986 with changes l and 2, and departmental directives provide guidance. The vehicle description must be unclassified for publication in DoD 4120.15–L.

*f.* The Military Departments must coordinate with the Under Secretary of Defense (Acquisition and Technology) through the channels stated in paragraph 3*b* before:

(1) Changing a basic mission or vehicle type symbol of an approved MDS designation (extraordinary circumstances must exist before taking this action).

(2) Referencing aerospace vehicles in public announcements and other documentation.

### 4. Aerospace Vehicle Popular Name Guidelines.

Military Departments will submit requests only for those aerospace vehicles that have reached production or have immediate prospects of entering the inventory.

*a.* Make names brief. Use no more than two short words. Choose a name which characterizes the mission and operational qualities of the vehicle (see DoD 4120.15–L for examples).

*b.* Submit at least three popular names in order of preference to ensure one will clear the review process.

*c.* Coordinate requests with the Military Department point of contact and CASC/LGFD as soon as possible to get a popular name assigned. Do not use a popular name before approval. ***NOTE:*** Air Force agencies must coordinate popular name requests with the applicable SPO.

*d.* Note that each MDS with the same basic mission and design number will usually keep the name assigned to the original MDS, regardless of variations in manufacturer, operational use, or change in series. Use the procedures in paragraph 5. to request consideration of exceptions.

*e.* Note that the manufacturer or military services may reserve a set of names for future models for their exclusive use.

### 5. Procedures for Requesting a Popular Name.

*a.* The Military Departments must submit a written request for assignment of a popular name through the Military Department's single point of contact (see Appendix E). The department contact will send the request to CASC/LGFD. ***NOTE:*** Air Force agencies send their requests to CASC/LGFD.

(1) CASC/LGFD will check requested names for duplication against the master list of popular names and send the request to HQ AFMC/PA, 4375 Chidlaw Road, Suite 6, Wright–Patterson AFB OH 45433–5006.

(2) HQ AFMC/PA will review the request and forward to SAF/PA, 1690 Air Force Pentagon, Washington DC 20330–1690, for processing and obtaining approval.

(3) Processing must include a trademark search. Final coordination must come from the Assistant Secretary of Defense (Public Affairs) (ASD/PA) to ensure public suitability.

*b.* Use the reverse order to notify requesters of approval or disapproval. HQ USAF/XPPE will add the approved popular name to DoD 4120.15–L on notification from CASC/LGFD.

### 6. Relationship of MDS Designator and Popular Name.

MDS is the official designation for aerospace vehicles. The MDS represents a specific category of vehicles for operations, support, and documentation purposes. Popular names characterize aerospace vehicle missions and aid communications and media references. Use either reference as a management tool; however, refer to the MDS in official publications and technical manuals.

### 7. Retirement of Aerospace Vehicle Designator or Popular Name.

When all aerospace vehicles with a specific MDS or popular name have retired from Service inventories, the Military Departments will notify the Service point of contact who will notify CASC/LGFD. CASC/LGFD will place these MDS

designators and popular names on the retired list and will notify HQ USAF/XPPE in order to remove them from DoD 4l20.l5–L. ***NOTE:*** Air Force agencies will notify CASC/LGFD through the applicable SPO.

**8. Publication of Approved MDS Designators and Approved Popular Names.**

DoD 4120.15–L lists approved MDS designators for all military aerospace vehicles in the DoD inventory. The list displays MDS designator, manufacturer, approved popular name, engine data, using department, and a brief description.

*a.* All DoD Components must use DoD 4120.15–L. DoD Components can get copies through their own publication channels.

*b.* Other Federal Agencies and the public may get copies from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

## Appendix A
## References

### Section I
### Required Publications
This section contains no entries.

### Section II
### Related Publications

**AFI 33–105**
C-4 Systems Information Technology

**AFPD 16–4**
Accounting for Units, Installations, and Aerospace Vehicles

**DoD Directive 4120.15**
Designating and Naming Military Aerospace Vehicles, May 2, 1985

**DoD 4120.15–L**
Model Designation of Military Aerospace Vehicles, March 1996

**DoD Manual 5000.12**
DoD Manual for Standard Data Elements (Microfiche)

**DoD Regulation 5200.1**
Information Security Program Regulation, June 1986 with Changes 1 and 2

### Section III
### Prescribed Forms
This section contains no entries.

### Section IV
### Referenced Forms
This section contains no entries.

## Appendix B
## DESCRIPTION AND POSITION OF STANDARDIZED MDS DESIGNATION SYMBOLS

***NOTE:*** Configuration numbers, block numbers, and serial numbers further identify configuration or specific vehicles but are not part of an MDS designator. DoD 4120.15–L does not contain these numbers. Assignments of configuration, block, and serial numbers do not require coordination with CASC/LGFD or approval by HQ USAF/XP.

### B–1. Status Prefix (Optional).

Indicates a nonstandard use of an aerospace vehicle, such as test, experimental, prototype, etc. Appears to the immediate left of the modified mission symbol or basic mission symbol for aircraft. Appears to the immediate left of the launch environment symbol or mission symbol for rockets and missiles. ***EXAMPLE:*** YF–16A. Status prefix "Y" denotes an F–16A prototype.

### B–2. Modified Mission (Aircraft Only)(Optional).

Identifies modifications to the basic mission of an aircraft. Appears to the immediate left of the basic mission symbol. ***EXAMPLE:*** RF–4C. Modified mission "R" identifies an F–4C modified for Reconnaissance.

### B–3. Launch Environment (Rockets, and Missiles Only)(Required).

Identifies the launch environment or platform parameter. Appears to the immediate left of the mission symbol. ***EXAMPLE:*** LGM–118A, Peacekeeper. Launch environment "L" indicates silo–launched missile.

### B–4. Basic Mission (Required).

Identifies the primary function and capability of an aerospace vehicle. For standard vehicles (e.g., bombers, fighters), it appears to the immediate left of the design number separated by a dash. EXAMPLE: F–16A. Basic mission "F" denotes fighter. For nonstandard vehicles it appears to the immediate left of the vehicle type symbol. ***EXAMPLE:*** LGM–118A. Vehicle type "M" indicates guided missile; basic mission "G" indicates surface attack.

### B–5. Vehicle Type (Nonstandard Vehicles Only)(Required).

Required for nonstandard vehicles, such as helicopter, vertical takeoff and landing, missile, space, etc. A basic mission or modified mission symbol must accompany the vehicle type symbol. Vehicle type appears to the immediate left of the design number, separated by a dash. ***EXAMPLE:*** CH–53A. Vehicle type "H" indicates a Helicopter with a basic mission of "C" Transport.

### B–6. Design Number (Required).

Identifies major design changes within the same basic mission. Design numbers run consecutively from "1" to "999". Appears to the immediate right of the basic mission symbol or vehicle type symbol, separated by a dash. ***EXAMPLE:*** F–16A. Design number "16" is the sixteenth MDS requested for an aircraft with a fighter mission under the current MDS reporting system.

### B–7. Series (Required).

Identifies the production model of a particular design number and later models representing major modifications that significantly alter the aerospace vehicle systems components or change the logistics support of the vehicle. Consecutive series symbols, starting with "A", appear to the immediate right of the design number. To avoid confusion, do not use the letters "I" and "0" for this symbol. ***EXAMPLE:*** F–16C. Series "C" indicates the third production model of the F–16.

### B–8. Configuration or Component Number (Rockets and Missiles Only).

Denotes configuration changes that affect performance, tactics, or integral components of a weapon system that require the same operations or logistics reporting as the aerospace vehicle. Appears to the immediate right of the series symbol, separated by a dash. Each Military Department determines its own method for assigning configuration numbers.

### B–9. Block Number.

Denotes a production group of identically configured aircraft within a particular design series. The Military Departments may reserve intermediate block numbers for field modifications.

### B–10. Serial Number.

Identifies a specific aerospace vehicle. Military departments determine the method for assigning serial numbers.

## Appendix C
## STANDARDIZED MDS DESIGNATOR SYMBOLS AND DESCRIPTIONS FOR AIRCRAFT

The following list outlines the symbols used in aircraft MDS designators. Figure C–1 shows a sample Aircraft MDS designator.

**Table C–1**
**Standardized MDS Designator Symbols and Descriptions for Aircraft**

| Status Prefix | | Modified Mission | | Basic Mission | | Vehicle Type | |
|---|---|---|---|---|---|---|---|
| G | Permanently Grounded | A | Attack | A | Attack | G | Glider |
| | | C | Transport | B | Bomber | H | Helicopter |
| J | Special Test (Temporary) | D | Director | C | Transport | Q | Unmanned Aerial Vehicle |
| | | E | Special Electronic Installation | E | Special Electronic Installation | S | Spaceplane |
| N | Special Test (Permanent) | | | | | V | VTOL/ STOL |
| X | Experimental | F | Fighter | F | Fighter | Z | Lighter Than-Air Vehicle |
| Y | Prototype | H | Search and Rescue | L | Laser | | |
| Z | Planning | | | O | Observation | | |
| | | K | Tanker | P | Patrol | | |
| | | L | Cold Weather | R | Reconnaisance | | |
| | | M | Multimission | S | Antisubmarine | | |
| | | O | Observation | T | Trainer | | |
| | | P | Patrol | U | Utility | | |
| | | Q | Drone | X | Research | | |
| | | R | Reconnaisance | | | | |
| | | S | Antisubmarine | | | | |
| | | T | Trainer | | | | |
| | | U | Utility | | | | |
| | | V | Staff | | | | |
| | | W | Weather | | | | |

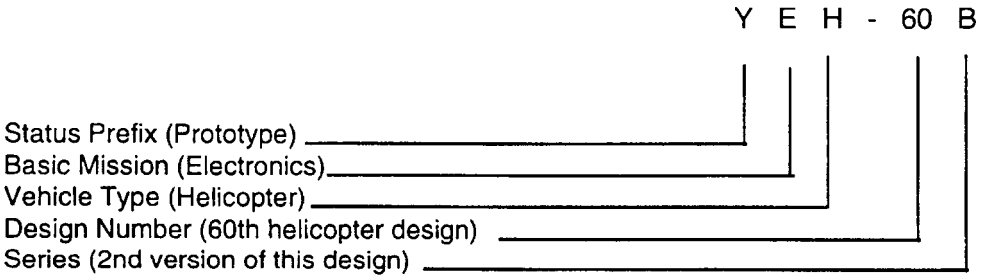


**Figure C–1. Sample Aircraft MDS.**

**Table C–2**
**Description of Aircraft Status Prefix Symbols**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| G | Permanently Grounded | Aircraft permanently grounded (may be used for ground training). |
| J | Special Test (Temporary) | Aircraft in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate a test. |
| N | Special Test (Permanent) | Aircraft in special test program by authorized activities or on bailment contract where the configuration changes so drastically that returning to the original operational configuration is impractical or uneconomical. |
| X | Experimental | Aircraft in a development or experimental stage. |
| Y | Prototype | A model suitable for evaluation of design, performance, and production potential. |
| Z | Planning | Aircraft in the planning or predevelopment stage. |

**Table C–3**
**Description of Aircraft Modified Mission Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| A | Attack | Aircraft modified to find, attack, and destroy enemy targets using conventional or special weapons. This symbol also describes aircraft used for interdiction and close air support missions. |
| C | Transport | Aircraft modified to carry personnel, cargo, or both. |
| D | Director | Aircraft modified for controlling drone aircraft or missiles. |
| E | Special Electronic Installation | Aircraft modified with electronic devices for one or more of the following missions:<br>(1) Electronic countermeasures.<br>(2) Airborne early warning radar.<br>(3) Airborne command and control, including communications relay.<br>(4) Tactical data commumcations link for all non-autonomous modes of flight. |
| F | Fighter | Aircraft modified to intercept and destroy other aircraft or missiles. |
| H | Search and Rescue | Aircraft modified for search and rescue missions. |
| K | Tanker | Aircraft modified to refuel other aircraft in flight. |
| L | Cold Weather | Aircraft modified for operation in Arctic and Antarctic regions. Includes skis, special insulation, and other equipment for extreme cold weather operations. |
| M | Multimission | Aircraft modified to perform several different missions. |
| O | Observation | Aircraft modified to observe (through visual or other means) and report tactical information concerning composition and disposition of forces. |
| P | Patrol | Long range, all weather, multiengine aircraft that operate from land or water bases modified for independent antisubmarine warfare, maritime reconnaissance, and mining. |
| Q | Drone | An aerospace vehicle modified for remote or automatic control. |
| R | Reconnaissance | Aircraft modified for photographic or electronic reconnaissance missions. |
| S | Antisubmarine | Aircraft modified to find, identify, attack, and destroy enemy submarines. |
| T | Trainer | Aircraft modified for training purposes. |
| U | Utility | Aircraft modified to perform multiple missions such as battlefield support, localized transport, and special light missions. |
| V | Staff | Aircraft modified to provide support for the President or Vice President of the United States. |
| W | Weather | Aircraft modified and equipped for meteorological missions. |

**Table C–4**
**Description of Aircraft Basic Mission Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| A | Attack | Aircraft designed to find, attack, and destroy enemy land or sea targets using conventional or special weapons. This symbol also applies to aircraft used for interdiction and close air support missions. |
| B | Bomber | Aircraft designed for bombing enemy targets. |
| C | Transport | Aircraft designed primarily to carry personnel, cargo, or both. |
| E | Special Electronic Installation | Aircraft designed for one or more of the following missions:<br>(1) Electronic countermeasures.<br>(2) Airborne early warning radar.<br>(3) Airborne command and control including communications relay.<br>(4) Tactical data communications link for all non-autonomous modes of flight. |
| F | Fighter | Aircraft designed to intercept and destroy other aircraft or missiles. Includes multipurpose aircraft also designed for ground support missions such as interdiction and close air support. |
| L | Laser | Vehicle designed for employing a high energy laser weapon. |
| O | Observation | Aircraft designed to observe (through visual or other means) and report tactical information concerning composition and disposition of forces. |
| P | Patrol | Long range, all weather, multiengine aircraft operating from land or water bases designed for independent antisubmarine warfare, maritime reconnaissance, and mining. |
| R | Reconnaissance | Aircraft designed for photographic or electronic reconnaissance missions. |
| S | Antisubmarine | Aircraft designed to find, detect, identify, attack, and destroy enemy submarines. |
| T | Trainer | Aircraft designed for training purposes. |
| U | Utility | Aircraft designed to perform multiple missions such as battlefield support, localized transport, and special light missions. Included are aircraft designed for small payloads. |
| X | Research | Aircraft designed for testing highly experimental configurations. These aircraft are not generally intended for use as operational aircraft. |

**Table C–5**
**Description of Aircraft Vehicle Type Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| G | Glider | Engine or engineless fixed wing aircraft flown by using air currents to keep it aloft. |
| H | Helicopter | Rotary wing aircraft (deriving lift from a rotating lifting surface). |
| Q | Unmanned Aerial Vehicle | An unmanned aircraft that uses aerodynamic forces for lift, autonomously or remotely piloted, expendable or recoverable, and can carry a lethal or nonlethal payload. |
| S | Spaceplane | Aircraft designed to travel above the earth's atmosphere and return to earth in support of space operations. |
| V | VTOL and STOL | Aircraft designed to take off and land vertically or in a very short distance. |
| Z | Lighter–Than–Air Vehicle | Nonrigid or semirigid aircraft that achieves its primary lift through use of hot gases or lighter–than–air gases (includes blimps and balloons). |

## Appendix D
## STANDARDIZED MDS DESIGNATOR SYMBOLS AND DESCRIPTIONS FOR GUIDED MISSILES, ROCKETS, PROBES, BOOSTERS, AND SATELLITES

The following list outlines the symbols used in guided missile, rocket, probe, booster and satellite MDS designations. Figure D-l shows a sample Missile MDS designator.

**Table D–1**
**Standardized MDS Designator Symbols and Descriptions for Guided Missiles, Rockets, Probes, Boosters, and Satellites**

| Status Prefix | | Launch Environment | | Mission | | Vehicle Type | |
|---|---|---|---|---|---|---|---|
| C | Captive | A | Air | | | B | Booster |
| D | Dummy | B | Multiple | | | M | Guided |
| J | Special Test (Temporary) | C | Coffin | C | Transport | | Missile |
| | | F | Individual | D | Decoy | N | Probe |
| N | Special Test (Permanent) | G | Surface | E | Electronic/ Communications/ | R | Rocket |
| | | H | Silo Stored | | | S | Satellite |
| X | Experimental | L | Silo Launched | | | | |
| Y | Prototype | M | Mobile | G | Surface Attack | | |
| Z | Planning | P | Soft Pad | | | | |
| | | R | Ship | I | Aerial/Space Intercept | | |
| | | S | Space | | | | |
| | | U | Underwater | | | | |
| | | | | L | Launch Detection/ Surveillance | | |
| | | | | M | Scientific Calibration | | |
| | | | | N | Navigation | | |
| | | | | Q | Drone | | |
| | | | | S | Space Support | | |
| | | | | T | Training | | |
| | | | | U | Underwater Attack | | |
| | | | | W | Weather | | |

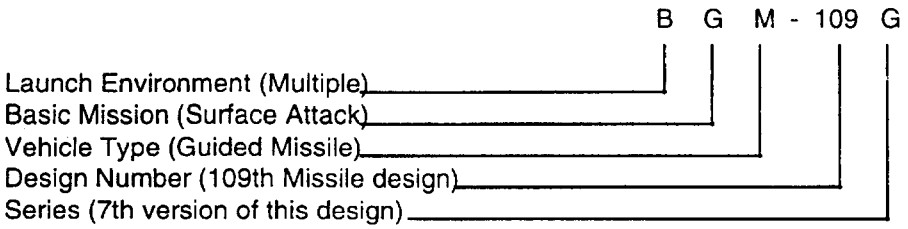


**Figure D–1. Sample Aircraft MDS.**

**Table D–2**
**Description of Status Prefix Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| C | Captive | Vehicle designed for carry on a launch platform, but incapable of being fired. |
| D | Dummy | Nonflyable vehicle used for training. |
| J | Special Test (Temporary) | Vehicle in special test programs by authorized organizations, on bailment contract with a special test configuration, or with installed property temporarily removed to accommodate tests. |
| N | Special Test (Permanent) | Vehicle in special test programs by authorized activities or on bailment contract whose configuration changes so drastically that returning to its original operational configuration is beyond practical or economical limits. |
| X | Experimental | Vehicle in a development or experimental stage. |
| Y | Prototype | A model suitable for evaluation of design, performance, and production potential. |
| Z | Planning | Vehicle in the planning or predevelopment stage. |

**Table D–3**
**Description of Launch Environment Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| A | Air | Vehicle launched in the air by another vehicle. |
| B | Multiple | Vehicle capable of being launched from more than one environment. |
| C | Coffin | Vehicle stored horizontally or at less than a 45 degree angle in a protective enclosure (regardless of structural strength) and launched from ground level. |
| F | Individual | Vehicle hand carried and launched by combat personnel. |
| G | Surface | Vehicle launched from a runway or the ground. |
| H | Silo Stored | Vehicle vertically stored but not launched from below ground level. |
| L | Silo Launched | Vehicle vertically stored and launched from below ground 1evel. |
| M | Mobile | Vehicle launched from a ground vehicle or movable platform. |
| P | Soft Pad | Vehicle partially protected or unprotected in storage and launched from ground level. |
| R | Ship | Vehicle launched from a surface vessel (ship or barge). |
| S | Space | Vehicle launched from an aerospace vehicle that operates outside the earth's atmosphere. |
| U | Underwater | Vehicle launched from a submarine or other underwater device. |

**Table D–4**
**Description of Mission Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| C | Transport | Vehicle designed to carry personnel, cargo, command, control, and communications equipment or weapons systems. |
| D | Decoy | Vehicle designed or modified to confuse, deceive, or divert enemy defenses by simulating an attack vehicle. |
| E | Electronic/ Communications | Vehicle designed or modified with electronic equipment for communications, countermeasures, electronic radiation sounding, or other electronic recording or relay missions. |
| G | Surface Attack | Vehicle designed to destroy enemy land or sea targets. |
| I | Aerial/Space Intercept | Vehicle designed to intercept aerial/space targets in defensive or offensive roles. |
| L | Launch Detection/Surveillance | Vehicle designed for the systematic observation of aerospace for the purpose of detecting, tracking, and characterizing objects, events and phenomena associated with satellites and in–flight missiles, including intrusion detection. |

**Table D–4**
**Description of Mission Symbols.—Continued**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| M | Scientific/ Calibration | Vehicle designed for the collection, evaluation, analysis, and interpretation of scientific and technical information. |
| N | Navigation | Vehicle designed to provide data for navigation purposes. |
| Q | Drone | Aerospace vehicle remotely or automatically controlled. |
| S | Space Support | Vehicle designed to ensure maintainability of space control and support of terrestrial forces. Includes activities such as launching and deploying space vehicles, maintaining and sustaining space vehicles while in orbit and recovering space vehicles if required. |
| T | Training | Vehicle designed or permanently modified for training purposes. |
| U | Underwater Attack | Vehicle designed to detonate underwater and to destroy submarines or other underwater targets. |
| W | Weather | Vehicle designed to observe, record, or relay meteorological data. |

**Table D–5**
**Description of Vehicle Type Symbols.**

| LETTER | TITLE | DESCRIPTION |
|---|---|---|
| B | Booster | A primary or auxiliary propulsion system used as a source of thrust for a satellite, missile, or aerospace vehicle. A Booster system may consist of one or more units. |
| M | Guided Missile | An unmanned vehicle that flies in and above the atmosphere and an external or internal guidance system controls its trajectory or flight path. |
| N | Probe | Nonorbital, instrumented vehicle designed to penetrate the aerospace environment. Commonly used for collection of meteorological data. |
| R | Rocket | A vehicle propelled by an engine that derives its thrust from ejection of hot gases generated by liquid or solid propellants carried in the vehicle. A rocket has no guidance (internal or external) after launch. |
| S | Satellite | A vehicle placed in various orbits to collect and transmit various types of data for multiple purposes. |

## Appendix E
## MILITARY DEPARTMENT POINTS OF CONTACT MAILING ADDRESSES

### E–1. Air Force and DoD:
CASC/LGFD, 74 Washington Avenue N Ste 8, Battle Creek MI 49017–3094.

### E–2. Army:
OASA(RDA), Attn: SARD–RP, Washington DC 20310–0103.

### E–3. Navy:
Commander, Naval Air Warfare Center Aircraft Division; Code 4141B120–3, Highway 547, Lakehurst, NJ 08733–5100.

## Glossary

### Section I
### Abbreviations

**AFI**
Air Force Instruction

**AFMC**
Air Force Materiel Command

**AFPD**
Air Force Policy Directive

**AR**
Army Regulation

**C-4**
Command, Control, Communications, and Computers

**CASC**
Cataloging and Standardization Center

**DoD**
Department of Defense

**HQ USAF**
Headquarters United States Air Force

**MDS**
Mission Design Series

**NAVAIRINST**
Navy Air Instruction

**OASD/PA**
Office of the Assistant Secretary of Defense, Public Affairs

**SAF/PA**
Assistant Secretary of the Air Force, Public Affairs

**SPO**
System Program Office

**UAV**
Unmanned Aerial Vehicle

### Section II
### Terms

**Aerospace Vehicle**
Collective term for military aircraft, rockets, guided missiles, boosters, satellites, probes, and unmanned aerial vehicles, and airborne lasers.

**Aircraft**
Vehicle designed primarily for flight in the atmosphere. It can carry a crew and payload (passengers; cargo; command, control, and communications systems; weapons, etc.).

**Booster**
An initial or auxiliary propulsion system which travels with a missile or aircraft and which may or may not separate

from the parent craft when its impulse has been delivered. A booster system may contain, or consist of, one or more units.

**Guided Missile**
An unmanned vehicle moving above the surface of the earth, whose trajectory or flight path is capable of being altered by an external or internal mechanism.

**Mission Design Series**
The official designation for aerospace vehicles used to represent a specific category of aerospace vehicles for operations, support, and documentation purposes.

**Popular Names**
Characterize aerospace vehicle missions and aid communications and media references.

**Probe**
A non–orbital, instrumented vehicle designed to penetrate the aerospace environment, commonly used for collecting meteorological data.

**Rocket**
A thrust-producing system that derives its thrust from ejection of hot gases generated from material carried in the system, not requiring intake of air or water (rockets may be either of liquid or solid propellant types).

**Satellite**
A vehicle placed in various orbits to collect and transmit various types of data for multiple purposes.

**Unmanned Aerial Vehicle (UAV)**
A powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload. Ballistic or semiballistic vehicles, cruise missiles, and artillery projectiles are not considered UAVs.

## Section III
## Special Abbreviations and Terms
This section contains no entries.

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